

# Hydral<sup>®</sup> Coat 5

## ALUMINUM HYDROXIDE (ATH)

### DESCRIPTION

Hydral<sup>®</sup> Coat 5 is a white aluminum trihydroxide Al(OH)<sub>3</sub>. It is a specially precipitated high-purity white aluminum trihydroxide powder with a brightness value of 99%. It has an extra-fine, uniform median particle size of about 0.5 microns in diameter. Hydral Coat 5 powder is a fully deagglomerated powder.

Hydral Coat 5 is halogen-free and finds wide application as a low-smoke, flame-retardant filler in thermoset and thermoplastic materials. It improves arc-track resistance in many plastics used in electrical applications.

As a reinforcing pigment in adhesives and adhesive tapes, Hydral Coat 5 improves cold flow properties, maintains the neutrality or alkalinity of the composition, and increases cohesion.

Chemical Composition (%)		
	Typical	Test Method
SiO <sub>2</sub>	0.005	DC Arc Optical Emissions Spectrometry
Fe <sub>2</sub> O <sub>3</sub>	0.006	DC Arc Optical Emissions Spectrometry
Na <sub>2</sub> O (total)	0.24	DC Arc Optical Emissions Spectrometry
Na <sub>2</sub> O (soluble)	0.04	Flame Emissions Photometry
Al(OH) <sub>3</sub>	99.6	Difference
Moisture	0.38	Microwave
Physical Properties		
Loose bulk density (g/cm <sup>3</sup> )	0.75	Modified ASTM B212-89
Packed bulk density (g/cm <sup>3</sup> )	1.00	Modified ASTM B527-85
Surface area (m <sup>2</sup> /g)	13.8	Brunauer-Emmett-Teller Nitrogen Adsorption
Brightness (% Z)	99.5	Z value of the XYZ Tristimulus divided by 1.18103
Refractive index	1.57	
Mohs hardness	3	
Electrical conductivity (μS/cm)	<200	Modified ISO787-14 (10%)
Particle Size		
% on 325 mesh	0.003	Wet Screen
d95 (μ)	1.20	Sedigraph 5100
d50 (μ)	0.50	Sedigraph 5100
d10 (μ)	0.30	Sedigraph 5100